REMARKS

Claims 1-40 are currently pending in the subject application and are presently under consideration. Claims 1, 9, 14, 19, 27, and 35 have been amended as shown on pp. 2-4, 6, and 7 of the Reply and claim 15 has been cancelled. An interview was conducted on May 8, 2008. While the discussion generally related to all the claims, the focus of the discussion focused on independent claim 9 and proposed amendments. In particular, reference Combs, *et al.* (US Patent 6,766,348) was discussed in the interview. The interview was conducted with Ronald Krosky (Reg. No. 58,564), Asmita Chande and Examiner. The main focus of the interview was on deficiencies of the 112, 101 and 102 rejections. No agreements were reached.

Favorable reconsideration of the subject patent application is respectfully requested in view of the comments and amendments herein.

I.   Rejection of Claims 1 and 3-26 Under 35 U.S.C §112

Claims 1 and 3-26 stand rejected under 35 U.S.C §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards to the invention. Independent claims 1 and 19 have been amended to recite a *computer implemented* system and independent claim 9 had been amended to recite a *computer implemented* network system. Further, independent claims 1, 9 and 19, as amended, recite similar aspects, namely a memory which is hardware. In view of the amendments above, it is respectfully requested that this rejection be withdrawn.

II.   Rejection of Claims 1 and 3-26 Under 35 U.S.C. §101

Claims 1 and 3-26 stand rejected under 35 U.S.C. §101 because the claimed invention is directed to non-statutory subject matter. This rejection should be withdrawn for at least the following reasons. The Federal Circuit has clearly established in *Eolas Techs., Inc. v. Microsoft Corp.*, 399 F.3d 1325, 1338 (Fed. Cir. 2005) and *AT&T Corp. v. Excel Communications, Inc.*, 172 F.3d 1352, 1358. (Fed.Cir. 1999) that inventions such as that claimed by applicant are statutory.

> This court must also decide whether software code made in the
> United States and exported abroad is a "component of a patented

invention" under 271(f)... Section 271(f) refers to "components of a patented invention."... Title 35, section 101, explains that an invention includes "any new and useful process, machine, manufacture or composition of matter."... Without question, *software code alone qualifies as an invention eligible for patenting under these categories*, at least as processes. *Eolas Techs., Inc. v. Microsoft Corp.*, 399 F.3d 1325, 1338 (Fed. Cir. 2005). (Emphasis added).

The Federal Circuit in *Eolas Techs., Inc. v. Microsoft Corp.* clearly established that software code alone is statutory subject matter. Independent claims 1, 9 and 19 relate to a system implemented on a computer. Independent claims 1 and 19, as amended, recite a *computer implemented system*, and independent claim 9, as amended, recites a *computer implemented* network *system*. A computer implemented system by itself is statutory subject matter. By the standards set forth in the above decision, a computer implemented system in the form of software, hardware, or the combination of both clearly falls within the categories of statutory subject matter. Further, independent claims 1, 9 and 19 a memory coupled to a processor, which is clearly hardware.

Additionally, the subject claims clearly produce a useful, concrete and tangible result.

Because the claimed process applies the Boolean principle [abstract idea] *to produce a useful, concrete, tangible result* ... on its face the claimed process comfortably falls within the scope of §101. *AT&T Corp. v. Excel Communications, Inc.*, 172 F.3d 1352, 1358. (Fed.Cir. 1999) (Emphasis added); *See State Street Bank & Trust Co. v. Signature Fin. Group, Inc.*, 149 F.3d 1368, 1373, 47 USPQ2d 1596, 1601 (Fed.Cir.1998). The inquiry into patentability requires an examination of the contested claims to see if the claimed subject matter, as a whole, is a disembodied mathematical concept representing nothing more than a "law of nature" or an "abstract idea," or if the mathematical concept has been *reduced to some practical application rendering it "useful."* *AT&T* at 1357 *citing In re Alappat*, 33 F.3d 1526, 31 1544, 31 U.S.P.Q.2D (BNA) 1545, 1557 (Fed. Cir. 1994) (Emphasis added) (holding that more than an abstract idea was claimed because the claimed invention as a whole was directed toward forming a specific machine that produced the useful, concrete, and tangible result of a smooth waveform display).

Independent claims 1, 9 and 19 recite a computer implemented system which itself is a concrete, useful and tangible result. Further, independent claim 1 discloses orchestrating the services executing on the computer system so as to control and coordinate resources, which is a concrete, useful, and tangible result. Furthermore, independent claim 9 relates to designating uniform resource identifiers for a set of services and distributing messages among the set of services, which is also a concrete, useful, and tangible result. Additionally, independent claim 19 teaches discovery of services and forwarding messages among services, which are clearly useful, concrete and tangible results.

In view of the above, it is readily apparent that the claimed invention as recited in independent claims 1, 9 and 19 (and associated dependent claims 2-8, 10-18 and 20-26) reduces to a practical application that produces a useful, concrete, tangible result; therefore, pursuant to *AT&T Corp. v. Excel Communications, Inc.*, 172 F.3d 1352, 1358 (Fed.Cir. 1999), the subject claims are directed to statutory subject matter pursuant to 35 U.S.C. §101. Accordingly, this rejection should be withdrawn.

III. Rejection of Claims 1-8 and 27-40 Under 35 U.S.C. §102(e)

Claims 1-8 and 27-40 stand rejected under 35 U.S.C. §102(e) as being anticipated by Combs, *et al.* (US Patent 6,766,348). Withdrawal of this rejection is requested for at least the following reasons. Combs, *et al.* fails to disclose or suggest all limitations set forth in the subject claims.

> A single prior art reference anticipates a patent claim only if it ***expressly or inherently describes each and every limitation set forth in the patent claim***. *Trintec Industries, Inc. v. Top-U.S.A. Corp.*, 295 F.3d 1292, 63 USPQ2d 1597 (Fed. Cir. 2002); *See Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The ***identical invention must be shown in as complete detail as is contained in the ... claim***. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989) (emphasis added).

Applicants' claimed subject matter relates to a system and method that provides a decentralized operating system (OS) that participates in a non-centralized network consisting of a plurality of computer systems that can communicate with each other, such that, they appear to

users as parts of a single, large, accessible "storehouse" of shared hardware, software and data, which are represented as services. In particular, the power and control of the decentralized OS is based on the capability of the system to compose services (local or remote) and form applications desired by users. Specifically, resources such as, devices, content, applications, and/or people are abstracted as autonomous computation entities called services that exchange messages according to protocols defined by each service. More specifically, a composition of services can be formed to represent a resource. To this end, independent claim 1 recites ***services for representing a resource, each service coupled to a decentralized operating system is an autonomous computation entity that exchanges one or more messages with a service coupled to a disparate decentralized operating system that resides in a different trust domain with a different security policy based in part on a protocol specified by the service*** and ***the services representing the resource perform computations on a plurality of computers linked by communication network***. Further, independent claims 27 and 35, recite similar aspect, namely, ***the second service resides in a different trust domain with a different security policy compared to the first service, wherein a resource is represented by multiple services***. Combs, *et al.* does not teach or suggest these novel aspects.

Combs, *et al.* relates to a system and method for exchanging data between a user and a distributed resource allocator handling system that allocates computer resources connected to a communication network to users requesting those resources. In particular, a resource allocator system agent is directly accessed by a user running on the same computer *via* an applications programming interface or by a user running on a remote computer *via* a communications protocol. The elements of the resource allocator handling system provides an efficient load balancing mechanism that allocates resources to users on the basis of similar domain and greatest capacity. However, the cited reference does not teach or suggest a ***decentralized*** operating system, which is employed to orchestrate services that represent a resource, including a device, content, application or person. Further, Combs, *et al.* does not disclose a service coupled to a decentralized operating system exchanges one or more messages with a service coupled to a disparate decentralized operating system that resides in a different trust domain with a different security policy based in part on a protocol specified by the service. Further, Combs, *et al.* is silent with respect to distributing a message to a first service using a unique name, the message being sent by a second service having a second unique name, the second service resides in

a different trust domain with a different security policy compared to the first service and/or does not teach a system wherein a resource is represented by multiple services.

Applicants' claimed subject matter, in contrast, discloses a system that represents devices, content, applications and/or people as services, such that they all can be unified by a decentralized OS even though each of them is diverse from the other. Ports of the services are endued with behavioral types that are specified by unilateral contracts. The preferred communication mechanism of the decentralized OS is through programmatically wired ports. Thus, by employing messages, heterogeneous resources distributed in multiple trust domains, each with its own security policy, can establish communication (*See* page 10, lines 16-28). Thus, devices, content, applications and/or people, as well as combinations of their rights and restrictions can be unified by the decentralized OS such that, each of them can be located locally or remotely and yet communicate with each other. Additionally, a composition of services can be formed to represent a resource (*e.g.* a hard disk). (*See* page 29, lines 14-23.) Further, the services perform computation in distribution kernels spread among multiple computers. Each service can perform a different task in a way that the combined work of the multiple services has a total computing effect greater than each alone. Combs, *et al.* is silent with respect to these novel aspects.

In view of at least the foregoing, it is readily apparent that Combs, *et al.* does not anticipate or suggest the subject invention as recited in claims 1, 27 and 35 (and associated dependent claims). Accordingly, it is respectfully requested that this rejection be withdrawn.

IV.   Rejection of Claims 9-26 Under 35 U.S.C. §103(a)

Claims 9-26 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Combs, *et al.* (US Patent 6,766,348) in view of Baskey, *et al.* (US Patent 7,089,294). Withdrawal of this rejection is requested since Combs, *et al.* and Baskey, *et al.* fails to teach or suggest all aspects of subject claims.

> *[T]he prior art reference (or references when combined) must teach or suggest all the claim limitations.* See MPEP § 706.02(j). *See also KSR Int'l Co. v. Teleflex, Inc.*, 550 U. S. ____, 04-1350, slip op. at 14 (2007). The teaching or suggestion to make the claimed combination and the reasonable expectation of success must be found in the prior art and not based on applicant's disclosure. *See In re Vaeck,* 947 F.2d 488, 20

USPQ2d 1438 (Fed. Cir. 1991) (emphasis added).

Applicant's subject claims relate to a system and method that provides a decentralized operating system (OS) that recognizes decentralized resources and coordinates the decentralized resources, local or remote, to create functionalities desired by a user. Specifically, a non-centralized mechanism is provided to orchestrate computations both at the periphery and at the core without appealing to a centralized authority. More specifically, independent claim 9 recites *a first decentralized operating system executing on a computer system, which includes a first distributing kernel for designating uniform resource identifiers for a first set of services and distributing messages among the first set of services, each service including a unilateral contract, the unilateral contract expressing behaviors of the service and a second decentralized operating system executing on a disparate computer system coupled to the network, which includes a second distributing kernel for designating uniform resource identifiers for a second set of services and distributing messages among the second set of services, each service including a unilateral contract, the unilateral contract expressing behaviors of the service, wherein a resource being represented as one or more services from the second set of services is orchestrated by the first distributing operating system*. Further, independent claim 19 recites, *a resource is represented by multiple services, wherein the service is an autonomous computation entity that exchanges one or more messages with a disparate service that resides in a different trust domain with a different security policy based in part on a protocol specified by the service.* Combs, *et al.* and Baskey, *et al.*, alone or in combination, fail to teach these novel aspects.

As discussed *supra*, Combs, *et al.* relates to a method and system for allocating distributed resources connected to a computer network to application programs running on one or more computers attached to the communication network. However, Combs, *et al.* is silent with respect to representing a resource, such as, a device, content, application and/or person, by multiple services, wherein a service is an autonomous computation entity that exchanges one or more messages with another service that resides in a different trust domain with a different security policy based in part on a protocol specified by the service. Further, Combs, *et al.* fails to teach a distributing kernel on one computer system that designates uniform resource identifiers for a set of services and distributes messages among the set of services, wherein, each service

includes a unilateral contract, the unilateral contract expressing behaviors of the service and/or does not disclose a disparate distributing kernel executing on a disparate computer that designates uniform resource identifiers for a disparate set of services and distributes messages among the disparate set of services, wherein, each service includes a unilateral contract, the unilateral contract expressing behaviors of the service, such that, a resource being represented as one or more services from the disparate set of services is orchestrated by a the distributing kernel. Baskey, *et al.* relates to a method and system for classifying a type of service of a communication request for an application executing on a server but does not make up for the aforementioned deficiencies of Combs, *et al.* with respect to independent claims 9 and 19.

In view of the foregoing, it is clear that Combs, *et al.* and Baskey, *et al.* alone or in combination fail to teach or suggest all aspects of claims 9 and 19 (and claims 10-18 and 20-26 that depend therefrom). Therefore, withdrawal of this rejection is requested.

<u>CONCLUSION</u>

The present application is believed to be in condition for allowance in view of the above comments and amendments. A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063 [MSFTP2197US].

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicants' undersigned representative at the telephone number below.

Respectfully submitted,

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